

# Breathable and Stretchable Temperature Sensors Inspired by Skin

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**Supplementary Video 1.** The demonstration of water proof property of the BCTS and its ability to sense the environment changes, such as water dropping, by detecting the slight temperature change.

**Supplementary Video 2.** The demonstration of in situ temperature measuring by putting the BCTS on the forearm. The device works properly despite of arm's rigid body movement and tensile/compressive/bending deformation.

**Supplementary Video 3.** The FEM results of the representative element in uniaxial stretching. The video shows the deformation (deformation scale factor=10) of the S-shaped element on contour of maximum principal strain distribution.